CIVIL XPERTS
ISO 9001:2008
CONSULTANTS & TESTING CENTER

174, Sri Ranga Complex
Amrutha Nagar Main Road
New Bank Colony, Konanakunte
Bangalore - 560 062.
Mobile : +91 97429 59595
Tele/Fax : 080-2632 2565
E-mail : civilexpertsltd@gmail.com
URL : www.civilexperts.in

NABL ACCREDITED AS PER ISO/IEC 17025:2005

Job No.: CECTC-CGC-Ward No.09-2013-14 **Date:** 20.01.2014

Aggregate Impact Value
IS: 2386 Part IV

Client	**Assistant Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	**Sri.C.G.Chandrappa,** Contractor, #4AC-402, CGC Complex, Basement floor, 4th Cross, 2nd Block, H.R.B.R Layout, Kalyan Nagara, Bangalore-43.
Name of the Work	Improvements to Ganeshnagara Layout Main Road and Cross Road in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	EE/BTP/BBMP/E-TND/80/2013-14 Dated:17.07.2013
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	20.01.2014

Sl No.	Details	Trial No. 1	Trial No. 2	Trial No. 3	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	389	391	387	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	90	93	89	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	299	298	298	
4	Aggregate Impact value = percent fines 100* (W_2/W_1)%	23.14	23.79	23.00	**23.31**

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

Information furnished by Agency

Note:

→ This test report should not be reproduced except in full, without written approval of the laboratory
→ The results indicated above are based on the tests carried out on the samples received in the laboratory
→ Any Query regarding the report must be reported within 15 days from the date of testing.

For CIVIL EXPERTS

Authorised Signatory

CIVIL XPERTS
ISO 9001:2008
CONSULTANTS & TESTING CENTER

174, Sri Ranga Complex
Amrutha Nagar Main Road
New Bank Colony, Konanakunte
Bangalore - 560 062.
Mobile : +91 97429 59595
Tele/Fax : 080-2632 2565
E-mail : civilexpertsltd@gmail.com
URL : www.civilexperts.in

NABL ACCREDITED AS PER ISO/IEC 17025:2005

Job No.: CECTC-CGC-Ward No.09-2013-14 **Date** : 20.01.2014

GRADATION FOR WMM
MORTH (5th Revision) TABLE-400-13

Client : **Assistant Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Sri.C.G.Chandrappa,** Contractor, #4AC-402, CGC Complex, Basement floor, 4th Cross, 2nd Block, H.R.B.R Layout, Kalyan Nagara, Bangalore-43.

Name of Work : Improvements to Ganeshnagara Layout Main Road and Cross Road in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-TND/80/2013-14 Dated:17.07.2013

Date of Testing : 20.01.2014

Material : Wet Mix Macadam

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **12620**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	503	503	4.0	96.0	95-100
22.4	4465	4968	39.4	60.6	60-80
11.2	2100	7068	56.0	44.0	40-60
4.75	1898	8966	71.0	29.0	25-40
2.36	1142	10108	80.1	19.9	15-30
0.600	1402	11510	91.2	8.8	8-22
0.075	800	12310	97.5	2.5	0-5

Information furnished by Agency

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing.

For CIVIL EXPERTS

Authorised Signatory

CIVIL XPERTS
ISO 9001:2008
CONSULTANTS & TESTING CENTER

174, Sri Ranga Complex
Amrutha Nagar Main Road
New Bank Colony, Konanakunte
Bangalore - 560 062.
Mobile : +91 97429 59595
Tele/Fax : 080-2632 2565
E-mail : civilexpertsltd@gmail.com
URL : www.civilexperts.in

NABL ACCREDITED AS PER ISO/IEC 17025:2005

Job No.: CECTC-CGC-Ward No.09-2013-14 **Date** : 20.01.2014

ATTERBERG LIMITS TEST FOR WMM
MORTH TABLE-400-13

Client : **Assistant Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Sri.C.G.Chandrappa,** Contractor, #4AC-402, CGC Complex, Basement floor, 4th Cross, 2nd Block, H.R.B.R Layout, Kalyan Nagara, Bangalore-43.

Name of Work : Improvements to Ganeshnagara Layout Main Road and Cross Road in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-TND/80/2013-14 Dated:17.07.2013

Date of Testing : 20.01.2014

Material : Wet Mix Macadam

Sample Location : WMM Mix Plant

As per MORTH Table 400-13

Sl. No.	Particulars	Test Results	Standards as per Morth Specifications
1	Liquid Limit, %	24.55	Nill
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

Information is furnished by the Agency

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing.

For CIVIL EXPERTS

Authorised Signatory

CIVIL XPERTS
ISO 9001:2008
CONSULTANTS & TESTING CENTER

174, Sri Ranga Complex
Amrutha Nagar Main Road
New Bank Colony, Konanakunte
Bangalore - 560 062.
Mobile : +91 97429 59595
Tele/Fax : 080-2632 2565
E-mail : civilexpertsltd@gmail.com
URL : www.civilexperts.in

NABL ACCREDITED AS PER ISO/IEC 17025:2005

Job No.: CECTC-CGC-Ward No.09-2013-14 Date:23.01.2014

TEST REPORT

Client	:	**Assistant Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	:	**Sri.C.G.Chandrappa,** Contractor, #4AC-402, CGC Complex, Basement floor, 4th Cross, 2nd Block, H.R.B.R Layout, Kalyan Nagara, Bangalore-43.
Name of the work	:	Improvements to Ganeshnagara Layout Main Road and Cross Road in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	:	EE/BTP/BBMP/E-TND/80/2013-14 Dated:17.07.2013
Source of location	:	Hot mix Plant, Bangalore
Date of testing	:	23.01.2014

The results of the tests conducted on the bitumen sample using for Semi Dense Bituminous Concrete

Sl. No	Description	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 ^{0}C, 1/10 mm	85	80 to 100
2	Softening point, ^{0}C	47	Min. 40
3	Ductility at 27^{0}C, cm	100 >	Min. 75
4	Flash Point, ^{0}C	312	Min. 220

Information Furnished by the Agency

Note:

⇒ This test report shall not be reproduced except in full, without written approval of the laboratory.

⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 15 days from the date of testing.

for CIVIL EXPERTS

Authorised Signatory

CIVIL XPERTS
ISO 9001:2008
CONSULTANTS & TESTING CENTER

174, Sri Ranga Complex
Amrutha Nagar Main Road
New Bank Colony, Konanakunte
Bangalore - 560 062.
Mobile : +91 97429 59595
Tele/Fax : 080-2632 2565
E-mail : civilexpertsltd@gmail.com
URL : www.civilexperts.in

NABL ACCREDITED AS PER ISO/IEC 17025:2005

Job No.: CECTC-CGC-Ward No.09-2013-14 Date: 23.01.2014

Aggregate Impact Value

IS: 2386 Part IV

Client	**Assistant Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	**Sri.C.G.Chandrappa,** Contractor, #4AC-402, CGC Complex, Basement floor, 4th Cross, 2nd Block, H.R.B.R Layout, Kalyan Nagara, Bangalore-43.
Name of the Work	Improvements to Ganeshnagara Layout Main Road and Cross Road in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	EE/BTP/BBMP/E-TND/80/2013-14 Dated:17.07.2013
Source / Location	Hot Mix Plant, Bangalore
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	23.01.2014

Sl No.	Details	Trial No. 1	Trial No. 2	Trial No. 3	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	385	382	383	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	86	80	79	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	299	302	304	
4	Aggregate Impact value = percent fines 100* (W_2/W_1)%	22.34	20.94	20.63	**21.30**

Comments:

→ Maximum allowable Aggregate Impact value for Semi Dense Bituminous Concrete is 27%

All the above Informations are furnished by Agency

Note:

Þ This test report should not be reproduced except in full, without written approval of the laboratory

Þ The results indicated above are based on the tests carried out on the samples received in the laboratory

Þ Any Query regarding the report must be reported within 15 days from the date of testing

For CIVIL EXPERTS

Authorised Signatory

CIVIL XPERTS
ISO 9001:2008
CONSULTANTS & TESTING CENTER

174, Sri Ranga Complex
Amrutha Nagar Main Road
New Bank Colony, Konanakunte
Bangalore - 560 062.
Mobile : +91 97429 59595
Tele/Fax : 080-2632 2565
E-mail : civilexpertsltd@gmail.com
URL : www.civilexperts.in

NABL ACCREDITED AS PER ISO/IEC 17025:2005

Job No.: CECTC-CGC-Ward No.09-2013-14 24.01.2014

BITUMEN CONTENT AND GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

AASHTO T 164 & AASHTO T 30

CLIENT	**Assistant Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
AGENCY	**Sri.C.G.Chandrappa,** Contractor, #4AC-402, CGC Complex, Basement floor, 4th Cross, 2nd Block, H.R.B.R Layout, Kalyan Nagara, Bangalore-43.
NAME OF THE WORK	Improvements to Ganeshnagara Layout Main Road and Cross Road in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
REFERENCE	EE/BTP/BBMP/E-TND/80/2013-14 Dated:17.07.2013
DATE OF TESTING	24.01.2014

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	474	474.5
3. Weight of Asphalt and Mineral matter Extracted,	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	26	25.50
7. Bitumen content in %	5.20	5.10
8. Average	5.15	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Trail 1				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	21.3	4.49	4.49	95.51	90-100
4.75	258.6	54.56	59.05	40.95	35-51
2.36	44.2	9.32	68.38	31.62	24-39
1.18	39.5	8.33	76.71	23.29	15-30
0.3	32.1	6.77	83.48	16.52	9-19
0.075	42.9	9.05	92.53	7.47	3-8

SIEVE SIZE	Trail 2				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	22.5	4.50	4.50	95.50	90-100
4.75	232.4	46.48	50.98	49.02	35-51
2.36	98.5	19.70	70.68	29.32	24-39
1.18	42.1	8.42	79.10	20.90	15-30
0.3	25.3	5.06	84.16	15.84	9-19
0.075	42.6	8.52	92.68	7.32	3-8

All the above Informations are furnished by Agency

Note:

- This test report should not be reproduced except in full, without written approval of the laboratory
- The results indicated above are based on the tests carried out on the samples received in the laboratory
- Any Query regarding the report must be reported within 15 days from the date of testing

For CIVIL EXPERTS

Authorised Signatory